

W6IFE San Bernardino Microwave Society Newsletter

W6IFE Newsletter

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The 3 **September 1998** meeting of the SBMS will have Bill, WA6QYR talk about aids to station operation on the hill top. The SBMS meets at the American Legion Hall 1024 Main Street (south of the 91 freeway in Corona, CA at 1930 hours local time on the first Thursday of each month..

Last meeting- Chip, N6CA talked about the people and topics of the 1998 Central States VHF Convention in Kansas City, KS. One item of interest is the signal from the Lunar Prospector on 2273 MHz. A majority of the people at the convention were EME types. Rumor is that WA7CJO will be operational on 24 GHz EME soon. Owen Wormser talked about the future of amateur radio frequencies , the FCC, and the ARRL as seem by him (a lobbyist in Washington, D.C.). In a letter from Gordon, WB6NOA, Paul Leib, KH6HME was nominated for the Dayton Hamfest Ham of the Year award. SBMS voted to second the nomination in a letter to the awards committee. Visitors were Owen, K6LEW from Washington, D.C.; Mike KD6FAM of Romoland; and Phil Lee, W6HCC from Wellington, CO. Welcome. New member is Bob Bajorek, K6ITU of Woodland Hills. Glad to have you on board. Mel WA6JBD of Riverside was presented with certificate #1 for 100% copy of the Morse code message on the SBMS 2.4 GHz beacon. Phil, W6HCC was presented with a plaque in recognition of his support and contributions to amateur microwave over the last decade. Phil is a holder of first place in the 10 GHz contest, has over 40 grids on 10 GHz, and has operated 10 GHz EME. SBMS is sorry to see him leave the local area and wishes him well in the Colorado area where he has already a following of amateur microwavers with weekly contacts across the plains. K6OW reminded every one to submit logs to ARRL for the 10 GHz contest even if you only had one contact a cross the street. We need to show the bands are active. 27 people present.

Swap meets still in business in Southern California are the 1st Saturday of the month the Miller High School in Fontana on Walnut street; the third Saturday is at Cal Poly Pomona Temple Street and the 57 highway parking lot F8,9,10 on Kellogg Drive. The last Saturday of the month is the infamous TRW event located on Aviation Drive next to TRW company in Los Angeles.

Activities reported at the August meeting were: Dave, K6OW scraped some large dishes stored at Phil's for lack of moving and storage space and Dave will have a beginners tech talk at the ARRL SW Division Conference 15 August; Chip, N6CA has a new 70 ft tower and a 5 ft dish in back yard for 5 GHz EME, the Palos Verde 10 GHz beacon is still in place with anticipated move request hanging in the wings; Chuck, WA6EXV made new amplifier boards for some of the 2.3 GHz equipment; Bill, WA6QYR built a "cheap" 1296 MHz yagi per the Kent Britian article in August CQ VHF; Bob, W6SYA is working on mods to the Qualcomm synthesizer; Mel, WA6JBD is near complete on a 24 GHz rig; Joe, WA6PAZ built a 24 GHz frequency spotter and made a tech talk at the West Coast Amateur Radio Club; Jim, K6ML made first contacts 10 GHz WBFM at the picnic; Derek KN6TD checked his 10 GHz WBFM rig at the picnic and is near complete with a 24 GHz rig; Eric KD6GLP has a working 10 GHz rig; Dick, K6HIJ is getting nearer to having his 10 GHz rig on the 100 ft pole; Ed, W6OYJ burned up a 1N26 diode in his 24 GHz rig due to cabling problems and is planning to help with a microwave demo at the SW Convention; Larry, K6HLH worked some 24 GHz contacts at the picnic; Doug, K6JEY had the transformer in his TS711 burn out; Owen K6LEW reported having rigs from 903 to 24 GHz in his roving van in the Washington D.C. area; Dick, WB6DNX worked some new 24 GHz contacts at the picnic.

Wants and Gots for sale

Want TWT's for 2.3 and 3.4 GHz (200w level) and 24 GHz transfer relay WR42 type, Owen Wormser K6LEW 800-224-5173.

Got Viking II + VFO \$100 Doug K6JEY 562-424-3737.

Scheduling

12 Sept. ARRL VHF QSO Party

19-20 Sept. ARRL 10 GHz and up cumulative 2nd half.

Elmers- To help you get on the microwave bands, the following SBMS members are willing to assist you in assembly, test of equipment and mentoring as necessary:

Ken Halford, WB6DTA elmer group meets 3rd wed of the month 6:00 to 10:00 p.m. at 2901 Joaquin Burbank, CA 91504 818-848-9059.

Joe Saddler, WA6PAZ elmer group meets the last Saturday of each month following the TRW swap meet at 13909 Fidler in Bellflower, CA. Phone 714-704-7937 or 562-867-3294 to confirm a couple of days in advance.

Dave Laag, K6OW in Moreno Valley, CA at 11614 Indian St. 909-924-1517.

Dick Bremer, WB6DNX in Brea at 1664 Holly 714-529-2800.

Al Johnson, K6LJM (ATV) in Running Springs, CA 909-867-7511.

Dick Kolbly, K6HIJ 26335 Community in Barstow, CA 760-253-2477.

Chuck Swedblom, WA6EXV in Ridgecrest, CA 760-377-4972.

Bill Burns, WA6QYR in Ridgecrest, CA 760-375-8566.

RF Design July 1998 had an article about RFID technology which uses a number of microwave frequencies to read identification tags in books in stores so they don't go out the door without being paid for or trucks going down the highway with weight data. A number of these are low power devices designed to work only a few feet, but some of these have higher power to operate over hundreds of feet. There are both the passive tag like in the book store and the active ones which interact with receiver/transmitter/ computer in a vehicle. The bands they operate in cover 2-27 MHz, 100-150 MHz, 430-460 MHz, 850-950 MHz, 2.35-2.45 GHz, 5.4-5.9 GHz and 24.125 GHz. Apparently the 902-916 MHz 2.4 GHz, and 5 GHz are "prolific" in toll road automatic vehicle ID and vehicle to roadside (railroad car tracking). Both 2.4 GHz and 24 GHz are popular. The 24 GHz is unlicensed in most of the world. (HUMM that maybe some of the strange 24 GHz signals heard on the 10 GHz contest 1st weekend.)

From a short note in June Microwaves & RF magazine, it would appear that True Position, Inc. will be using Trimble GPS clock data in all its cell phone sites to run "time-difference-of-arrival" measurements on cell calls to 911. The FCC Wireless E911 mandate specifies that E911 calls must be located within 125 meters by Oct. 2001. June 1998 Microwave Journal reports that DOD and DoT have created an Interagency GPS Executive board and plans to add a second signal to future GPS satellites. The new system is to be available by 2005. TAPR has a "totally Accurate Clock" kit which provides time and precision 1 pps signals from GPS. A future item is to be a highly accurate reference oscillator connected to the clock in a similar fashion as the July 1998 QST article about using GPS signals to stabilize a oscillator in the order of the rubidium based standards discussed at the July SBMS meeting by Doug, K6JEY.

From July RSGB Microwave Newsletter reports a one way 24 GHz P3 ATV signals between sending station TM2SHF (200 mw into 75 cm dish) on Corsia(JN42hf) and F/HB9AFO/P (DB6NT converter with 1 m dish) on Mont Caume (JN23we) for 248 km. A new 10 GHz ATV record was set in the UK over 821 km. IK3NWX/3 and I3CLZ/3 (200 uw, 8 dB NF, 40 cm dish)in Mount Grappa (JN55vc) made a 203 km world record 47 GHz contact with I4QIG/5 (15 mw, 6.6 dB NF, 1m dish) in JN54qb in May.

Mt. Diablo Amateur Radio Club will be sponsoring Pacificon 98 (ARRL Pacific division conference) at the Concord Airport Sheraton Hotel, Concord, CA on October 16-18, 1998. www.mdarc.org.

Weekend 1 of ARRL 10 GHz and UP contest had lots of confusion going on. Friday night was interesting from this observer (WA6QYR) on Heaps Peak, DM14kf. There was lots of lightning and rain covering the northern 180 degrees over the desert. Morning came with some sun, but the view to the north or south was very hazy. Dick, WB6DNX arrived on site and the contest was off and running with just Chuck, WA6EXV roving in the desert. Apparently the liaison intertie was having problems too. The majority of the Southern California microwavers apparently were off else where. The ARRL SW Div. conference in San Diego had a number of people tied up on Saturday. Doug, K6JEY came out on 10 and 24 GHz in the afternoon to do some roving in DM03/04/05/13/14/15. N6XQ, WB6BKR, N6IZW were out during the afternoon in the San Diego area. WB6YLI was operating from home. Sunday started with an earthquake in the San Diego area that rocked the towers and my truck on Heaps Pk. Sunday was a little better when the liaison got fixed, but conditions were worse in that 24 GHz just didn't propagate. Longer 10 GHz shots to the desert died during the afternoon along with conditions on 450 and even 2 mtrs. Several 10 GHz contacts were made from S Cal to K6GZA in Northern Cal. Other stations on Sunday were WA6PAZ, N6CA, K6OW, WA6CDR, W6DXJ, W6OYJ, WA6CGR, KC6UQH, KD6OZH, WB6ZSU, K6ENS, and N6LL. Thanks to all the rovers out and about populating many sites. Where were all the guys with the 10 GHz WBFM rigs? Hopefully the second weekend will be better for propagation and people.

ARRL Pacific Div Update for September 1998 by Brad Wyatt, K6WR. As part of the Telecommunications Act of 1996, Congress mandated a "Biennial Review", - "aimed at simplifying, eliminating or modifying regulations that are overly burdensome or no longer serve the public interest" - for all services regulated by FCC. For the Amateur Radio Service, the FCC has now proposed to phase out the Novice and Technician Plus class licenses, leaving just four amateur license classes - Technician, General, Advanced, and Extra. The Commission also has asked the amateur community to express its opinions on Morse code requirements for licensing and testing, but offered no specific changes. They also asked for comments on the written examinations and on how to improve enforcement of rules. These proposals were among several suggested rules changes and invitations to comment

contained in an FCC Notice of Proposed Rulemaking (NPRM), WT Docket 98-143, made public August 10, 1998. This NPRM offers a uniquely long comment period ending on Dec. 1, 1998, with the opportunity to comment via the WWW, email, and hard copy letters. This long comment period provides a unique challenge for ALL amateurs to give their opinions on a wide range of topics vital to the future of Amateur Radio. In proposing to phase out the Novice and Tech Plus tickets, the FCC said "there appears to be an unnecessary overlap between the Novice, Technician, and Technician Plus license classes." The FCC also said that Technician and Tech Plus operators "predominantly" use FM and packet on VHF and UHF. In addition, the FCC said Novice applicants last year numbered fewer than 1000, while there were nearly 21,500 Technician applications. Under the FCC plan, Novice and Tech Plus licensees would retain current operating privileges, but no new Novice or Tech Plus licenses would be granted. For examination purposes, current examination Elements 2 and 3A would be combined into a new Element 3A. For administrative purposes, the FCC would combine the current Technician and Tech Plus databases into a single Technician database. The FCC did not propose to change any operating frequencies or license privileges for amateurs. However, the FCC does seek comment on the disposition of the current Novice HF bands, which carry a 200W output power limit for all licensees. The FCC invited comment on whether it would be "appropriate" to delete the Novice bands and the power restrictions on higher-class licensees and permit Novices to operate CW anywhere on 80, 40, 15, and 10 meters at 200W output. The Commission asked for comments on Morse code testing from the amateur community. In particular, the Commission said it wants to know if hams prefer the current three-level system or would like to see it reduced to a one or two-tier system - and, if so, at what required speeds. The FCC asked whether hams would be willing to trade a reduction in Morse code requirements for additional written elements on newer digital technologies "which, in part, are replacing the Morse code." And, the Commission asked whether it should consider specifying Morse code examination methods, such as fill-in-the-blank or one minute of solid copy, instead of allowing VEs to determine the testing method. The FCC also invited comments on whether it should change written examination requirements "to provide VEs and VECs additional flexibility in determining the specific contents of written examinations." Referring to an ARRL petition, RM-9150, the FCC invited comments on how it can improve its Amateur Radio enforcement processes. The FCC applauded the ARRL "for its creative thinking" in that petition, but said the specific proposal was "inconsistent" with the current statutory role of administrative law judges. The FCC raised the possibility of encouraging complainants to include a draft order "to show cause to initiate a revocation or cease and desist hearing proceeding." The FCC said it also wants to hear how it can better use the services of the Amateur Auxiliary in beefing up enforcement. The FCC also seeks comments on how to deal with potential abuses of the current disability waiver for higher-speed Morse code tests. In RM-9196, the ARRL had asked the FCC to require anyone applying for an exemption pursuant to a doctor's certification to first attempt the higher-speed test before examination credit could be given. The League also asked that VECs have access to relevant medical information from the certifying physician. The FCC said the ARRL's proposal would place "an unfair burden on examinees" and raised serious privacy and confidentiality issues. In other matters the FCC went along with another ARRL petition and proposed allowing Advanced class hams to be eligible to prepare and administer license examinations up through General class under the VE program. The FCC also proposed to phase out Radio Amateur Civil Emergency Service (RACES) stations by not renewing their licenses. The FCC also took the occasion to clarify the definition of "power" as used in the RF exposure table in Section 97.13(c) (1). The FCC said it refers to peak envelope power (PEP) input to the antenna. It also made clear that no one holding an FCC-issued ham ticket may apply for a reciprocal permit for an alien amateur license. Significantly, the FCC set a longer-than-normal comment period. The deadline for comments is December 1, 1998. The deadline for reply comments is January 15, 1999. The FCC is encouraging electronic comments via the WWW at <http://www.fcc.gov/e-file/ecfs.html> by email at ecfs@fcc.gov (for instructions, include in the body of the message the words - "Get form <your email address>". Of course, written comments prepared in the traditional way and sent by US mail will also be accepted. A copy of the complete NPRM has been posted on the ARRL Web page, <http://www.arrl.org>, and at the Pacific Division Web page at pdarrl.org. The FCC NPRM can also be downloaded from the FCC Web site in Word Perfect 5.1 and Text versions at: <http://www.fcc.gov/Bureaus/Wireless/Notices/1998/fcc98183.wp> or <http://www.fcc.gov/Bureaus/Wireless/Notices/1998/fcc98183.txt> respectively. (See Sept QST p9, Ed) October QST will carry the full story on the FCC NPRM, as well as an editorial on the subject.

[Some views of Dick, WB6DNX & WA6QYR on Heaps Pk on 24 and 10 Ghz during Aug 98 contest.](#)

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